

[Document Name] Abstract sheet

[Abstract]

[Problems]

It is an object of the present invention to apply a technique for removing the adverse effect of a substrate shrinkage due to a heat treatment, and further forming a fine and high-quality insulating film, and a semiconductor device that can realize high-performance and high-reliability by using the same, to a transistor formed by laminating a semiconductor film or an insulating film over a glass substrate.

[Means for solving]

A heat treatment that is necessary in a step of forming a thin film element by laminating a semiconductor film or an insulating film over a glass substrate is performed without thermally-damaging the substrate. For the purpose, a light-absorbing layer that can absorb pulsed light over a particular portion of the substrate in which the thin film element is formed is locally formed, and the heat treatment is performed. A semiconductor layer or an insulating layer is disposed between the light-absorbing layer and the substrate, and thus, the portion overlapping with the light-absorbing layer is selectively heated to high temperature and the heat treatment can be performed.

[Selected drawing] FIG. 1